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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,282	03/03/2004	Ichiro Aoshima	SE-US035160	8930

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SHINJYU GLOBAL IP COUNSELORS, LLP
1233 20TH STREET, NW, SUITE 700
WASHINGTON, DC 20036-2680

EXAMINER	
SUN, XIUQIN	

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/791,282	AOSHIMA ET AL.	
	Examiner	Art Unit	
	Xiuqin Sun	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 14-33* is/are pending in the application.

4a) Of the above claim(s) *10-13* is/are withdrawn from consideration.

5)☒ Claim(s) *14-16 and 22-33* is/are allowed.

6)☒ Claim(s) *1 and 17-20* is/are rejected.

7)☒ Claim(s) *2-9 and 21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 04/29/2006
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. A response on 10/18/2005 a provisional election was made without traverse to prosecute the invention of claims 1-9 and 14-33. Claims 10-13 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Shiratori et al. (U.S. Pub. No. 20040094613).

With respect to claim 1:

Shiratori et al. teach a body motion detection device configured to be attached to a forearm of a human body to detect a body motion of the human body (sections 0008-0011), comprising: a body motion sensor unit configured and arranged to detect an acceleration caused substantially by a movement of the forearm during walking and an

acceleration caused substantially by a movement of the forearm during running to output at least one body motion signal (sections 0054, 0055, 0064 and 0065); and a body motion component extracting section configured and arranged to extract a body motion component from said at least one body motion signal (sections 0062, 0063, 0099 and 0123).

With respect to claim 17:

Shiratori et al. teach a method of detecting a body motion of a human body (sections 0008-0011), comprising: performing a body motion signal outputting process for detecting an acceleration caused substantially by a movement of a forearm during walking and an acceleration caused substantially by a movement of the forearm during running to output at least one body motion
Signal (sections 0054, 0055, 0064 and 0065); and performing a body motion component extracting process for extracting a body motion component from said at least one body motion signal (sections 0062, 0063, 0099 and 0123).

With respect to claims 18-20:

Shiratori et al. teach: said body motion signal outputting process includes detecting the acceleration caused substantially by the movement of the forearm during walking to output a first body motion signal and detecting the acceleration caused substantially by the movement of the forearm during running to output a second body motion signal (sections 0054, 0055, 0064, 0065, 0129 and 0130), and said body motion component extracting process includes performing a first frequency analyzing process for executing a frequency analysis of said first body motion signal (sections 0064 and

0065), performing a second frequency analyzing process for executing a frequency analysis of said second body motion signal (sections 0064 and 0065), and performing a reference wave determining process for determining a reference wave for extracting said body motion component based on results of the frequency analysis from said first and second frequency analysis processes (sections 0099, 0119, 0121-0123); said body motion signal outputting process includes detecting the acceleration caused substantially by the movement of the forearm during walking to output a first body motion signal and detecting the acceleration caused substantially by the movement of the forearm during running to output a second body motion signal (sections 0054, 0055, 0064, 0065, 0129 and 0130), and said body motion component extracting process includes performing an integrating process for creating an integrated body motion signal by integrating said first and second body motion signals (sections 0063 and 0064), performing a frequency analyzing process for executing a frequency analysis of said integrated body motion signal (sections 0070 and 0071), and performing a reference wave determining process for determining a reference wave for extracting said body motion component based on a result of the frequency analysis from said frequency analyzing process (sections 0070 and 0071); said body motion signal outputting process includes detecting the acceleration caused substantially by the movement of the forearm during walking to output a first body motion signal and detecting the acceleration caused substantially by the movement of the forearm during running to output a second body motion signal (sections 0054, 0055, 0064, 0065, 0129 and 0130), and said body motion component extracting process includes performing an amplifying

process for creating an amplified first body motion signal by amplifying said first body motion signal by a prescribed amplification rate (section 0116); performing a first frequency analyzing process for executing a frequency analysis of said amplified first body motion signal (sections 0070, 0071, 0116, 0117 and 0121-0123); performing a second frequency analyzing process for executing a frequency analysis of said second body motion signal (sections 0070, 0071, 0116, 0117 and 0121-0123); and performing a reference wave determining process for determining a reference wave for extracting a body motion component based on results of the frequency analysis from said first and second frequency analyzing processes (sections 0070, 0071, 0116, 0117 and 0121-0123).

Allowable Subject Matter

4. Claims 2-9 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 14-16 and 22-33 are allowed.

Reasons for Allowance

6. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claims 2-9 is the inclusion of the limitations: a first acceleration sensor configured and arranged to detect said acceleration caused by the movement of the forearm during walking and output a first

body motion signal; a second acceleration sensor configured and arranged to detect said acceleration caused by the movement of the forearm during running and output a second body motion signal; and said body motion component extracting section configured and arranged to extract said body motion component based on said first and second body motion signals; and said body motion component extracting section configured and arranged to extract
said body motion component based on said first and second body motion signals. It is these limitations found in each of the claims, as they are claimed in the combination that have not been found, taught or suggested by the prior art of record, which make these claims allowable over the prior art.

The primary reason for the allowance of claims 14-16 and 29-32 is the inclusion of the limitations: a first acceleration sensor configured and arranged to detect said acceleration caused by the movement of the forearm during walking and output a first body motion signal; a second acceleration sensor configured and arranged to detect said acceleration caused by the movement of the forearm during running and output a second body motion signal; and said body motion component extracting section configured and arranged to extract said body motion component based on said first and second body motion signals. It is these limitations found in each of the claim, as they are claimed in the combination that have not been found, taught or suggested by the prior art of record, which make these claims allowable over the prior art.

The primary reason for the allowance of claim 21 is the inclusion of the limitation of performing a preprocessing calculation process for outputting an integrated body

motion signal by integrating said first and second body motion signals after preprocessing said first and second body motion signals such that maximum amplitudes of said first and second body motion signals become substantially equal to each other. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

The primary reason for the allowance of claims 22-24 is the inclusion of the limitation of performing a pitch calculating process for calculating a pitch from a signal that is on furthest low frequency side among said signals extracted by said signal extracting process. It is this limitation found in each of the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 25-28 and 33 is the inclusion of the limitation of controlling, by a computer, a body motion detection device attached to a human body to detect a body motion of the human body, said body motion detection device having a first acceleration sensor for detecting an acceleration caused substantially by a movement of a forearm of the human body during walking to output a first body motion signal and a second acceleration sensor for detecting an acceleration caused substantially by a movement of the forearm during running to output a second body motion signal. It is this limitation found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art Citations

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Unuma et al. (U. S. Pat. No. 6571193) is entitled "Method, apparatus and system for recognizing actions".

2) Townsend et al. (U. S. Pat. No. 6834436) is entitled "Posture and body movement measuring system".

3) Kubo et al. (U. S. Pub. No. 20020089425) is entitled "Body motion detector".

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (571)272-2280. The examiner can normally be reached on 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571)272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Xiuqin Sun
Examiner
Art Unit 2863

XS
December 15, 2005

John Barlow
Supervisory Patent Examiner
Technology Center 2800